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EXAMINER

WEST, LEWIS G

ART UNIT PAPER NUMBER

2682

7

DATE MAILED: 11/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

KS

# Office Action Summary

Application No.

09/304,879

Applicant(s)

JOHNSON, HAROLD W.

Examiner

Lewis G. West

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3,10-42,44,51-83,85 and 92-125 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,10-42,44,51-83,85 and 92-125 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Specification***

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Regarding claims 12, 53 and 94, although it states in applicant's specification that one of ordinary skill in the art would have known to use different types of logic, last come first serve logic is not directly mentioned in the specification.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-11, 13-16, 18, 22, 27, 30-57, 59, 63, 68, 71-93, 95, 98, 100, 104, 109, 112-125 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raychaudhuri (US 5,638,371) in view of Hou (6,324,184).

Regarding claim 1, Raychaudhuri discloses a method for communicating between a communications device and a network system, the method comprising: receiving a request for a communication service into a base station system over a wireless transmission link; in response to receiving the request, dynamically configuring a media access control (MAC) layer in the wireless transmission link for the requested communication service; and generating and transmitting an instruction to provide the requested communication service over the wireless

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transmission link using the dynamically configured MAC layer. (Column 7 lines 20-40; column 9 lines 42-67)

wherein dynamically configuring the MAC layer in the wireless transmission link further comprises: identifying a section of the MAC layer of the wireless transmission link for the requested communication service; arbitrating access between the request and other requests for communication services for a position in the section of the MAC layer in the wireless transmission link; and identifying the position in the section of the MAC layer for the requested communication service based on the arbitration of access. (Column 7 lines 20-40; column 9 lines 42-67)

wherein identifying the section of the MAC layer of the wireless transmission link for the requested communication service further comprises executing allocation rules to identify the section of the MAC layer for the requested communication service. (Col. 11 line 50- col. 12 line 60)

wherein the allocation rules are based on a control objective. (Col. 11 line 50- col. 12 line 60)

wherein the control objective is to maintain all traffic flowing during peak load of traffic. (Col. 11 line 50- col. 12 line 60)

wherein the control objective is to continually exchange high priority traffic between the communication device and the network system. (Col. 11 line 50- col. 12 line 60)

wherein the control objective is to reduce capacity for low priority traffic during congestion periods. (Col. 11 line 50- col. 12 line 60)

Raychaudhuri does not expressly disclose monitoring historical trends. Hou discloses a method wherein the control objective is to use a plausibility check for verifying actual traffic usage of capacity in the MAC layer in the wireless transmission link with historical trends of traffic usage of capacity in the MAC layer in the wireless transmission link. (Column 11 lines 37-60)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to check usage capacity with historical trends in order to efficiently allocate bandwidth during periods of varied usage.

Regarding claim 3, The combination of Raychaudhuri and Hou discloses the method of claim 2 wherein identifying the section of the MAC layer of the wireless transmission link for the requested communication service further comprises identifying a control family for the requested communication services wherein the control family relates to the section of the MAC layer. (Col. 11 line 50- col. 12 line 60)

Regarding claim 10, the combination of Raychaudhuri and Hou discloses the method of claim 2 wherein arbitrating access is further comprised of prorating among communication services based on usage parameter control values. (Col. 7 lines 6-55)

Regarding claim 11, The combination of Raychaudhuri and Hou discloses The method of claim 2 wherein arbitrating access is further comprised of using first come first serve logic. (Col. 3 lines 52-61)

Regarding claim 13, the combination of Raychaudhuri and Hou discloses the method of claim 2 wherein arbitrating access is further comprised of using fair queuing logic. (Col. 3 lines 52-61)

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Regarding claim 14, the combination of Raychaudhuri and Hou discloses the method of claim 2 wherein arbitrating access is further comprised of using burst servicing logic. (Col. 3 lines 52-61)

Regarding claim 15, the combination of Raychaudhuri and Hou discloses the method of claim 2 wherein arbitrating access is further comprised of using time of expiry logic. (Col. 10 lines 33-39)

Regarding claim 16, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the communication service is voice communication. (Col. 4 line 36-53)

Regarding claim 18, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the communication service is modem communication. (Col. 4 line 36-53)

Regarding claim 22, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the communication service is data transfer. (Col. 4 line 36-53)

Regarding claim 27, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the communication service is desktop multimedia communication. (Col. 4 line 36-53)

Regarding claim 30, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein dynamically configuring the MAC layer in the wireless transmission link is based on delivery requirements of communication services. (Col. 7 lines 6-40)

Regarding claim 31, the combination of Raychaudhuri and Hou discloses the method of claim 30 wherein the delivery requirement is time dependency. (Col. 7 lines 6-40)

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Regarding claim 32, the combination of Raychaudhuri and Hou discloses the method of claim 30 wherein the delivery requirement is a need for real time communication. (Col. 4 line 36-53)

Regarding claim 33, the combination of Raychaudhuri and Hou discloses the method of claim 30 wherein the delivery requirement is quality of service. (Col. 7 lines 6-40)

Regarding claim 34, the combination of Raychaudhuri and Hou discloses the method of claim 30 wherein the delivery requirement is traffic pattern. (Col. 11 line 50- col. 12 line 60)

Regarding claim 35, the combination of Raychaudhuri and Hou discloses the method of claim 30 wherein the delivery requirement is bandwidth. (Col. 3 lines 62-64)

Regarding claim 36, the combination of Raychaudhuri and Hou discloses the method of claim 30 wherein the delivery requirement is grade of service. (Col. 7 lines 6-40)

Regarding claim 37, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the MAC layer of the wireless transmission link further comprises a fixed allocation sub frame and a dynamic allocation sub frame. (Col. 7 lines 6-40)

Regarding claim 38, the combination of Raychaudhuri and Hou discloses the method of claim 37 wherein the fixed allocation sub frame further comprises requests slots for reservation information. (Col. 7 lines 6-19)

Regarding claim 39, the combination of Raychaudhuri and Hou discloses the method of claim 37 wherein the fixed allocation sub frame further comprises constant bit rate slots for voice packets. (Col. 7 lines 6-40)

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Regarding claim 40, The combination of Raychaudhuri and Hou discloses The method of claim 37 wherein the dynamic allocation sub frame further comprises variable bit rate slots for variable bit rate packets. (Col. 7 lines 6-40)

Regarding claim 41, Raychaudhuri discloses the method of claim 37 wherein the dynamic allocation sub frame further comprises data slots for data packets. (Col. 7 lines 6-40)

Regarding claim 42, Raychaudhuri discloses a software product comprising:  
communication software operational when executed by a processor to direct the processor to receive a request for a communication service into a base station system over a wireless transmission link, in response to receiving the request, dynamically configure a media access control (MAC) layer in the wireless transmission link for the requested communication service, and generate and transmit an instruction to provide the requested communication service over the wireless transmission link using the dynamically configured MAC layer; and a software storage medium operational to store the communication software. (Column 7 lines 20-40; column 9 lines 42-67)

wherein the communication software is operational when executed by the processor to direct the processor to: identify a section of the MAC layer of the wireless transmission link for the requested communication service; arbitrate access between the request and other requests for communication services for a position in the section of the MAC layer in the wireless transmission link; and identify the position in the section of the MAC layer for the requested communication service based on the arbitration of access. (Column 7 lines 20-40; column 9 lines 42-67)



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wherein the communication software is operational when executed by the processor to direct the processor to execute allocation rules to identify the section of the MAC layer for the requested communication service. (Col. 11 line 50- col. 12 line 60)

wherein the allocation rules are based on a control objective. (Col. 11 line 50- col. 12 line 60)

wherein the control objective is to maintain all traffic flowing during peak load of traffic. (Col. 11 line 50- col. 12 line 60)

wherein the control objective is to continually exchange high priority traffic between the communication device and the network system. (Col. 11 line 50- col. 12 line 60)

wherein the control objective is to reduce capacity for low priority traffic during congestion periods. (Col. 11 line 50- col. 12 line 60)

Raychaudhuri does not expressly disclose monitoring historical trends. Hou discloses a wherein the control objective is to use a plausibility check for verifying actual traffic usage of capacity in the MAC layer in the wireless transmission link with historical trends of traffic usage of capacity in the MAC layer in the wireless transmission link. (Column 11 lines 37-60)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to check usage capacity with historical trends in order to efficiently allocate bandwidth during periods of varied usage.

Regarding claim 44, The combination of Raychaudhuri and Hou discloses The software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to identify a control family for the requested communication

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services wherein the control family relates to the section of the MAC layer. (Col. 11 line 50- col. 12 line 60)

Regarding claim 51, The combination of Raychaudhuri and Hou discloses The software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to prorate among communication services based on usage parameter control values. (Column 7 lines 20-40)

Regarding claim 52, The combination of Raychaudhuri and Hou discloses The software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to use first come first serve logic. (Col. 3 lines 52-61)

Regarding claim 54, the combination of Raychaudhuri and Hou discloses the software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to use fair queuing logic. (Col. 3 lines 52-61)

Regarding claim 55, The combination of Raychaudhuri and Hou discloses The software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to use burst servicing logic. (Col. 3 lines 52-61)

Regarding claim 56, the combination of Raychaudhuri and Hou discloses the software product of claim 43 wherein the communication software is operational when executed by the processor to direct the processor to use time of expiry logic. (Col. 10 lines 33-39)

Regarding claim 57, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the communication service is voice communication. (Col. 4 line 36-53)

Regarding claim 59, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the communication service is modem communication. (Col. 4 line 36-53)

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Regarding claim 63, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the communication service is data transfer. (Col. 4 line 36-53)

Regarding claim 68, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the communication service is desktop multimedia communication. (Col. 4 line 36-53)

Regarding claim 71, The combination of Raychaudhuri and Hou discloses The software product of claim 42 wherein the communication software is operational when executed by a processor to direct the processor to dynamically configure the MAC layer in the wireless transmission link based on delivery requirements of communication services. (Col. 7 lines 6-40)

Regarding claim 72, the combination of Raychaudhuri and Hou discloses the software product of claim 71 wherein the delivery requirement is time dependency. (Col. 7 lines 6-40)

Regarding claim 73, the combination of Raychaudhuri and Hou discloses the software product of claim 71 wherein the delivery requirement is a need for real time communication. (Col. 4 line 36-53)

Regarding claim 74, the combination of Raychaudhuri and Hou discloses the software product of claim 71 wherein the delivery requirement is quality of service. (Col. 7 lines 6-40)

Regarding claim 75, the combination of Raychaudhuri and Hou discloses the software product of claim 71 wherein the delivery requirement is traffic pattern. (Col. 11 line 50- col. 12 line 60)

Regarding claim 76, the combination of Raychaudhuri and Hou discloses the software product of claim 71 wherein the delivery requirement is bandwidth. (Col. 3 lines 62-64)

Regarding claim 77, the combination of Raychaudhuri and Hou discloses the software product of claim 71 wherein the delivery requirement is grade of service. (Col. 7 lines 6-40)

Regarding claim 78, The combination of Raychaudhuri and Hou discloses the software product of claim 42 wherein the MAC layer of the wireless transmission link further comprises a fixed allocation sub frame and a dynamic allocation sub frame. (Col. 7 lines 6-40)

Regarding claim 79, the combination of Raychaudhuri and Hou discloses the software product of claim 78 wherein the fixed allocation sub frame further comprises requests slots for reservation information. (Col. 7 lines 6-40)

Regarding claim 80, the combination of Raychaudhuri and Hou discloses the software product of claim 78 wherein the fixed allocation sub frame further comprises constant bit rate slots for voice packets. (Col. 7 lines 6-40)

Regarding claim 81, The combination of Raychaudhuri and Hou discloses The software product of claim 78 wherein the dynamic allocation sub frame further comprises variable bit rate slots for variable bit rate packets. (Col. 7 lines 6-40)

Regarding claim 82, the combination of Raychaudhuri and Hou discloses the software product of claim 78 wherein the dynamic allocation sub frame further comprises data slots for data packets. (Col. 7 lines 6-40)

Regarding claim 83, Raychaudhuri discloses A wireless communication system for communicating between a communications device and a network system, the communication system comprising: a subscriber unit system that is configured to transmit a request for a communication service for the communication device, exchange communications for the communication service with the communication device over a wireless transmission link

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identified in an instruction using a dynamically configured media access control (MAC) layer; and a base station system that is configured to receive the request over the wireless transmission link for the communication service, in response to receiving the request, dynamically configure the MAC layer in the wireless transmission link for the requested communication service, and generate and transmit the instruction. (Column 7 lines 20-40; column 9 lines 42-67)

wherein the base station system is configured to: identify a section of the MAC layer of the wireless transmission link for the requested communication service; arbitrate access between the requests and other requests for communication services for a position in the section of the MAC layer in a wireless transmission link; and identify the position in the section of the MAC layer for the requested communication service based on the arbitration of access. (Column 7 lines 20-40; column 9 lines 42-67)

wherein the base station system is configured to execute allocation rules to identify the section of the MAC layer for the requested communication service. (Col. 11 line 50- col. 12 line 60)

wherein the allocation rules are based on a control objective. (Col. 11 line 50- col. 12 line 60)

wherein the control objective is to maintain all traffic flowing during peak load of traffic. (Col. 11 line 50- col. 12 line 60)

wherein the control objective is to continually exchange high priority traffic between the communication device and the network system. (Col. 11 line 50- col. 12 line 60)

wherein the control objective is to reduce capacity for low priority traffic during congestion periods. (Col. 11 line 50- col. 12 line 60)

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Raychaudhuri does not expressly disclose monitoring historical trends. Hou discloses a system wherein the control objective is to use a plausibility check for verifying actual traffic usage of capacity in the MAC layer in the wireless transmission link with historical trends of traffic usage of capacity in the MAC layer in the wireless transmission link. (Column 11 lines 37-60)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to check usage capacity with historical trends in order to efficiently allocate bandwidth during periods of varied usage.

Regarding claim 85, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 84 wherein the base station system is configured to identify a control family for the requested communication services wherein the control family relates to the section of the MAC layer. (Col. 11 line 50- col. 12 line 60)

Regarding claim 92, The combination of Raychaudhuri and Hou discloses the wireless communication system of claim 84 wherein the base station system is configured to prorate among communication services based on usage parameter control values. (Col. 7 lines 6-40)

Regarding claim 93, The combination of Raychaudhuri and Hou discloses the wireless communication system of claim 84 wherein the base station system is configured to use first come first serve logic. (Col. 3 lines 52-61)

Regarding claim 95, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 84 wherein the base station system is configured to use fair queuing logic. (Col. 3 lines 52-61)

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Regarding claim 96, The combination of Raychaudhuri and Hou discloses The wireless communication system of claim 84 wherein the base station system is configured to use burst servicing logic. (Col. 3 lines 52-61)

Regarding claim 97, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 84 wherein the base station system is 5 configured to use time of expiry logic. (Col. 10 lines 33-39)

Regarding claim 98, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the communication service is voice communication. (Col. 4 line 36-53)

Regarding claim 100, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the communication service is modem communication. (Col. 4 line 36-53)

Regarding claim 104, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the communication service is data transfer. (Col. 4 line 36-53)

Regarding claim 109, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein the communication service is desktop multimedia communication. (Col. 4 line 36-53)

Regarding claim 112, The combination of Raychaudhuri and Hou discloses The wireless communication system of claim 83 wherein the base station system that is configured to dynamically configure the MAC layer in the wireless transmission link is based on delivery requirements of communication services. (Col. 7 lines 6-40)

Regarding claim 113, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 112 wherein the delivery requirement is time dependency. (Col. 7 lines 6-40)

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Regarding claim 114, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 112 wherein the delivery requirement is the need for real time communication. (Col. 4 line 36-53)

Regarding claim 115, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 112 wherein the delivery requirement is quality of service. (Col. 7 lines 6-40)

Regarding claim 116, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 112 wherein the delivery requirement is traffic pattern. (Col. 11 line 50- col. 12 line 60)

Regarding claim 117, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 112 wherein the delivery requirement is bandwidth. (Col. 3 lines 62-64)

Regarding claim 118, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 112 wherein the delivery requirement is grade of service. (Col. 7 lines 6-40)

Regarding claim 119, The combination of Raychaudhuri and Hou discloses the wireless communication system of claim 83 wherein the MAC layer of the wireless transmission link further comprises a fixed allocation sub frame and a dynamic allocation sub frame. (Col. 7 lines 6-40)

Regarding claim 120, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 119 wherein the fixed allocation sub frame further comprises requests slots for reservation information. (Col. 7 lines 6-40)



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Regarding claim 121, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 119 wherein the fixed allocation sub frame further comprises constant bit rate slots for voice packets. (Col. 7 lines 6-40)

Regarding claim 122, The combination of Raychaudhuri and Hou discloses The wireless communication system of claim 119 wherein the dynamic allocation sub frame further comprises variable bit rate slots for variable bit rate packets. (Col. 7 lines 6-40)

Regarding claim 123, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 119 wherein the dynamic allocation sub frame further comprises data slots for data packets. (Col. 7 lines 6-40)

Regarding claim 124, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 83 wherein the subscriber unit system further comprises a communication interface system, a multiplexer, and a subscriber wireless transceiver. (Column 6 lines 35-46)

Regarding claim 125, the combination of Raychaudhuri and Hou discloses the wireless communication system of claim 83 wherein the base station system further comprises a base wireless transceiver, a multiplexer, a connection admission control system, and a network interface system. (Column 6 lines 19-34)

3. Claims 17, 19-21, 23-26, 28-29, 58, 60-62, 64-67, 69, 70, 99, 101-103, 105-108, and 110-111 rejected under 35 U.S.C. 103(a) as being unpatentable over Raychaudhuri in view of Hou.

Regarding claims 17, 19-21, 23-26 and 28-29, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein various types of multimedia communication are used

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and that any type of multimedia may be used (Col. 4 line 36-53). Though, not expressly disclosed, Examiner takes official notice that it was notoriously obvious in the art at the time of the invention that facsimile, audio broadcast, web browsing, file transfer, network gaming, PUSH, chat room communication, e-mail, video broadcast and video conferencing are various types of multimedia communication. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use any or all of these types of communication, to provide every possible service to a user, which would be necessary to stay competitive in the telecommunications market.

Regarding claims 58, 60-62, 64-67, 69 and 70, The combination of Raychaudhuri and Hou discloses the method of claim 1 wherein various types of multimedia communication are used and that any type of multimedia may be used (Col. 4 line 36-53). Though, not expressly disclosed, Examiner takes official notice that it was notoriously obvious in the art at the time of the invention that facsimile, audio broadcast, web browsing, file transfer, network gaming, PUSH, chat room communication, e-mail, video broadcast and video conferencing are various types of multimedia communication. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use any or all of these types of communication, to provide every possible service to a user, which would be necessary to stay competitive in the telecommunications market.

Regarding claims 99, 101-103, 105-108 and 110-111, the combination of Raychaudhuri and Hou discloses the method of claim 1 wherein various types of multimedia communication are used and that any type of multimedia may be used (Col. 4 line 36-53). Though, not expressly disclosed, Examiner takes official notice that it was notoriously obvious in the art at the time of

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the invention that facsimile, audio broadcast, web browsing, file transfer, network gaming, PUSH, chat room communication, e-mail, video broadcast and video conferencing are various types of multimedia communication. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use any or all of these types of communication, to provide every possible service to a user, which would be necessary to stay competitive in the telecommunications market.

4. Claims 12, 53, and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Raychaudhuri in view of Hou further in view of Boucher et al. (US 6,226,680 B1).

Regarding claim 12, the combination of Raychaudhuri and Hou discloses the method of claim 2 wherein arbitrating access is further comprised of using various types of logic. The combination of Raychaudhuri and Hou does not expressly disclose last come first serve logic. Boucher discloses using last come first serve logic with a MAC layer. (Col. 16) Therefore it would have been obvious to one of ordinary skill in the art to use last come first serve logic in arbitrating the MAC layer, in order to implement a stack type system.

Regarding claim 53, the combination of Raychaudhuri and Hou discloses the method of claim 2 wherein arbitrating access is further comprised of using various types of logic. The combination of Raychaudhuri and Hou does not expressly disclose last come first serve logic. Boucher discloses using last come first serve logic with a MAC layer. (Col. 16) Therefore it would have been obvious to one of ordinary skill in the art to use last come first serve logic in arbitrating the MAC layer, in order to implement a stack type system.

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Regarding claim 94, the combination of Raychaudhuri and Hou discloses the method of claim 2 wherein arbitrating access is further comprised of using various types of logic. The combination of Raychaudhuri and Hou does not expressly disclose last come first serve logic. Boucher discloses using last come first serve logic with a MAC layer. (Col. 16) Therefore it would have been obvious to one of ordinary skill in the art to use last come first serve logic in arbitrating the MAC layer, in order to implement a stack type system.

### *Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ko et al (US 5,479,407) also discloses MAC allocation which takes historical trends into consideration.

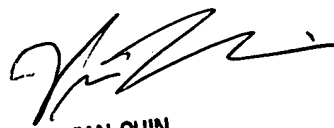
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis G. West whose telephone number is 703-308-9298. The examiner can normally be reached on Monday-Thursday 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.



Lewis West  
(703) 308-9298  
November 4, 2003



VIVIAN CHIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600